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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/635,804	08/05/2003	Yue Jun Jiang	RMWR.P010	8833
53186	7590	01/24/2006	EXAMINER	
COURTNEY STANIFORD & GREGORY LLP P.O. BOX 9686 SAN JOSE, CA 95157			CAI, WAYNE HUU	
			ART UNIT	PAPER NUMBER
			2681	
DATE MAILED: 01/24/2006				

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/635,804

Applicant(s)

JIANG ET AL.

Examiner

Wayne Cai

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 18 November 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1 and 26-49 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,26-36,39-49 is/are rejected.
- 7) ☒ Claim(s) 37 and 38 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 October 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>10/12/2005</u> . | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

This Office Action is in response to Amendment dated 11/18/2005.

#### ***Drawings***

1. The drawings were received on 10/07/2005. These drawings are accepted.

#### ***Response to Arguments***

2. Applicant's arguments filed have been fully considered but they are not persuasive.

The Applicant asserts that independent claims 1 and 26 as amended is not anticipated by Huang (US 6,058,309), and Huang also fails to teach "sending a response to the mobile station indicating that the registration attempt is terminated, wherein the response comprises an error message." The Examiner respectfully disagrees since Huang does describe the Service Redirection Message (i.e., the error message). This Service Redirection Message instructs the MS to terminate with the MSC-2 and redirects it to MSC-3. The message is being exchanged between the system and the MS is considered as the error message.

In regard to independent claim 21, Huang does teach "a traffic redirection node that monitors" as claimed because once the MS enters in a new serving system, the communications between the HLR and VLR is required to update the MS location and instruct the MS to register with a preferred network. If the MS is registered with a non-preferred network, but a more preferable is found, then the MS is instructed to connect

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with a more preferable network. Hence, a traffic redirection node is configured to monitor so that the proper instruction could be delivered to the MS or at least to determine that the MS is currently in a non-preferable network and needs to move to another preferable network.

In regard to independent claims 35, and 36, Huang also teaches or suggests that "if it is determined that the mobile station is initiating a registration attempt with a non-preferred network, the mobile station receiving a response from the HPLMN indicating that the registration is terminated." Because Huang describes that when the MS is attempting to connect to MSC-2, but there is another preferable system, then it is instructed to communicate with a more preferable system (i.e., MSC-3). Inherently, when the MS is attempting to register with MSC-3, HPLMN would indicate the registration attempt is terminated with MSC-2. It would be illogical to have traffic signals at both MSC-2 and MSC-3 when the system has already chosen MSC-3 to be another preferable network to attempt to connect with.

### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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4. Claims 1, 26, 29-30, 32-34, 36, 39-40, 43-44, and 46-49 are rejected under 35 U.S.C. 102(b) as being anticipated by Huang et al. (hereinafter "Huang") (US 6,058,309).

**Regarding claims 1, and 39,** Huang discloses a method and a computer-readable medium having instructions stored thereon which, when executed in a wireless communication network, cause elements of the network to control wireless network traffic, controlling comprising:

- determining when a roaming mobile station initiates a registration attempt with a non-preferred network (col. 3, lines 50-64), wherein initiating comprises the mobile station sending a message to a Home Public Mobile Network (HPLMN) to update its locations (col. 4, lines 17-19 teaches that the REDIRECT\_RECORD identifies the preferred system in the geographical region of the MS and any necessary parameters for connecting to that system. Therefore, it is known that MS sends a message to HPLMN to updates its location because the cited portion of the reference describes that the system could redirect the MS to somewhere else within the geographical region of the MS in which it means that the MS updates its location in order for the system or HPLMN to recognize where the MS is located at the moment.);
- sending a response to the mobile station indicating that the registration attempt is terminated, wherein the response comprises an error message (col. 4, lines 20-67). Specifically, the cited reference teaches that the MSC-2

and its associated computer sends a Service Redirection message to the mobile station to provide the mobile station information about the preferred system (MSC-3) (i.e., an error message). Inherently, since the system redirects the MS to register with MSC-3 since it could not establish the connection with the MSC-2, the error message includes a message indicating the registration attempt with the MSC-2 is terminated and attempts to establish connection with the MSC-3.

**Regarding claims 26, and 40,** Huang discloses the method, and the computer-readable medium of claims 1, and 39 as described. Huang also discloses wherein determining when a roaming mobile station initiates a registration attempt with a non-preferred network comprises reading a location update request from the mobile station (col. 3, line 65 – col. 4, line 33).

**Regarding claims 29, and 43,** Huang discloses the method, and the computer-readable medium of claims 1, and 39 as described. Huang also discloses wherein determining when a roaming mobile station initiates a registration attempt with a non-preferred network comprises reading an authentication request from a visited network (col. 5, lines 35-54).

**Regarding claims 30, and 44,** Huang discloses the method, and the computer-readable medium of claims 29, and 39 as described. Huang further discloses wherein the error message comprises a message that a send authentication information transaction is aborted (col. 6, lines 18-67 teaches that if the MS unsuccessfully attempts to connect with MSC-2, then the Service Redirection message directs the MS to

attempts connecting with MSC-3. The MSC-3 also requests for the authentication information as known in the art. Therefore, it is inherent that the send authentication information to the MSC-2 is aborted since it is now re-directed to provide authentication information to MSC-3).

**Regarding claims 32, and 46,** Huang discloses the method, and the computer-readable medium of claims 26, and 40 as described. Huang also discloses wherein the error message comprises a message that roaming is restricted (i.e., the system redirects the MS to MSC-3 since it is restricted to make a connection with MSC-2).

**Regarding claims 33, and 47,** Huang discloses the method, and the computer-readable medium of claims 1, and 39 as described. Huang further discloses comprising:

- the mobile station initiating a subsequent registration attempt with a subsequent network (i.e., when the HLR is still looking out for a more preferable network; see col. 4, lines 8-11);
- if the subsequent network is determined to be a non-preferred network, sending the response to the mobile station indicating that the registration attempt is terminated (It is inherent that the registration attempt with MSC-2 is terminated so that the registration attempt with MSC-3 could be proceeded);
- if the subsequent network is determined to be a preferred network (i.e., when MSC-3 is determined that it is another preferable network), proceeding with the registration attempt, wherein the mobile station is not aware of which

networks are preferred and which networks are non-preferred (col. 4, lines 55-62).

**Regarding claim 34**, Huang discloses a system for directing roaming network traffic, the system comprising:

- a Home Public Mobile Network (HPLMN) that is a home network of a mobile station (fig. 1, "HLR");
- a Visited Public Mobile Network (VPLMN) configured to communicate with the HPLMN via a signaling network wherein the mobile station is roaming when in the VPLMN (col. 3, line 50 – col. 4, line 7);
- a traffic redirection node configured to monitor signaling between the HPLMN and the VPLMN, including determining when the mobile station is roaming in the VPLMN and whether the VPLMN is a preferred network (i.e., when MSC-2 is not preferable, and look out for MSC-3 which is a more preferable one), wherein if the VPLMN is not a preferred network, the HPLMN sends a message to the mobile station to terminate a current transaction between the VPLMN and the HPLMN (col. 4, lines 8-67). Notes: it is also inherent that the traffic connection with MSC-2 is terminated so that the registration with MSC-3, which is a preferable network could take place.

**Regarding claim 36**, Huang discloses the method of claim 34 as described above. Huang further discloses wherein:

- the mobile station is configured to receive the message and in response, attempt to register with a subsequent VPLMN, wherein the mobile station is



- not aware of which networks are preferred and which networks are non-preferred (i.e., attempt to connect to MSC-2);
- the traffic redirection node is further configured to monitor signaling between the HPLMN and the subsequent VPLMN, including determining whether the subsequent VPLMN is a preferred network, wherein if the VPLMN is not a preferred network, the HPLMN sends a message to the mobile station to terminate a current transaction between the VPLMN and the HPLMN (i.e., when the system further monitors and redirects the MS to attempt connecting with MSC-3).

**Regarding claim 48**, Huang discloses a wireless communication method comprising:

- a mobile station sending a message to a Home Public Mobile Network (HPLMN) to update its location, wherein the message is used to determine whether the roaming mobile station is initiating a registration attempt with a non-preferred network (col. 3, line 50 – col. 4, line 19);
- if it is determined that the mobile station is initiating a registration attempt with a non-preferred network, the mobile station receiving a response from the HPLMN indicating that the registration attempt is terminated (col. 4, lines 20-67), wherein the response comprises an error message (col. 4, lines 55-62).

**Regarding claim 49**, Huang discloses a wireless communication system comprising:

- a mobile station configurable to send a message to a Home Public Mobile Network (HPLMN) to update its location (i.e., when the HLR and its associated computer identifies the preferred system in the geographical region of the MS. Therefore, the location of MS must be identified in order to determine a preferred system in the current geographical of the MS.), wherein the message is used to determine whether the roaming mobile station is initiating a registration attempt with a non-preferred network (col. 4, lines 20-33);
- a HPLMN configurable to determine that the mobile station is initiating a registration attempt with a non-preferred network, and further configurable to send an error message to the mobile station indicating that the registration attempt with the non-preferred network is terminated (col. 4, lines 34-67).

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 27-28, 31, 41-42, and 45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Huang.

**Regarding claims 27-28, 31, 41-42, and 45,** Huang discloses the method, and the computer-readable medium of claims 26, and 39 as described, except wherein the

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error message comprises a message that an update location transaction is aborted, timing out a response to the location update request, timing out to the authentication request. However, the claim features are well known in the art because by adding a timer to time out certain operations could be easily modified and implement by one skilled in the art.

7. Claim 35 is rejected under 35 U.S.C. 103(a) as being unpatentable over Huang in view of Sorenson et al. (hereinafter "Sorenson") (US 6,463,298 B1).

**Regarding claim 35**, Huang discloses the system of claim 34 as described above. Huang further discloses wherein the transaction is selected from a group comprising:

- a request for authentication information (col. 4, lines 55-62);
- It is also inherent to include an update location transaction when roaming to a visited network.

Huang, however, does not specifically disclose:

- a message indicating that the current transaction is timed out.

In a similar endeavor, Sorenson discloses a method of acquiring an alternate communication system upon failure of reverse link communication. Sorenson also discloses a message indicating that the current transaction is timed out (col. 4, lines 14-29).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to include a timed-out feature so that the system would be able to acquire another system or at least to retry the predetermined operation.

***Allowable Subject Matter***

8. Claims 37, and 38 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Conclusion***

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Wayne Cai whose telephone number is (571) 272-7798. The examiner can normally be reached on Monday-Friday; 9:00-6:00; alternating Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Feild can be reached on (571) 272-4090. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Wayne Cai  
Examiner  
Art Unit 2681

  
ERIKA A. GARY  
PRIMARY EXAMINER